

SHAMSHURA, T., agronom

Timing doubles the force of fertilizers. Zemledelle 27 no.6:
66-68 Je '65. (MIRA 18:9)

1. Kolhoz "Prizyv" Vitebskogo rayona, Vitebskoy oblasti.

SHAMSHURIN, A.A., kand.khim.nauk

New inhibitor in wine making. Priroda 53 no.6:115-116 '64.

(MIRA 17:6)

1. Institut khimii AN Moldavskoy SSR, Kishinev.

LAGEREV, S.P., SHAMSHURIN, A.A.

"On fixation of Hydrogen Chloride on Methylphenylethylene," Zhur, Obshch. Khim.,
9, No. 3, 1939. Uzoek State University, Received 17 March 1938.

Report U-1517, 22 Oct 1951

IX

Fixation of hydrogen chloride in methylphenylethylene
S. P. Langer and A. A. Shamsburin. *J. Gen. Chem.*
U. S. S. R. 19, 100, 202, 1930. According to the Wieg-
ner-Zaitsev law, substituted ethylene hydrocarbons react
with halogen halides with the fixation of the halogen on the
unsat'd. C bearing the Me or Ph group. It was of interest
to investigate this reaction with olefins of the type PhCH=CH-
Me (I). PhCH=CHMe (II), b. 108-10°, (from BzH
and EtMgBr) when treated with dry HCl at room temp.
for 12 hrs. yielded PhCH₂CH₂Me (III), b. 81°. Re-
fluxing III with excess of alc. KOH for 5-6 hrs., dlgt. the
distn. residue with H₂O and exg. with Et₂O gave nearly
100% I, b. 69-70°, d. 1.724, d₄²⁰ 0.913. Oxidation
with KMnO₄ in H₂O formed H₂O and AcOH and the
reaction with Br₂ gave the *di-Bz deric*, white needles, m.
67°. I was also obtained from PhCH=CHOMe, b.
110°, d. 210° (from PhCH=CHMgCl and AcOH) by treating it
with HCl and decomg. the resulting PhCH₂CH₂OMe, b.
94-5°, with KOH as above. I, treated with HCl, gave II,
acetate of II, b. 226-7°. The addn. of the neg. Cl ion
takes place at the C atom polarized by the action of Ph
with a greater neg. charge than that of the Me group.
Chas. Blanc

CHAYSHURIN, A. A.

600

1. CHAYSHURIN, A. A.

2. USSR (600)

"A Few Words on Obtaining Methyl Chloride by the Reaction between Dimethylsulfate and Aluminum Chloride", Zhr. Obshch. Khim. 9, No. 23, 1939. Lab. of Organic Chemistry, Samarkand Medical Inst. Received 23 June 1939.

9. Report U-1626, 11 Jan. 1952.

ca 10

The reaction between triphenylbenzylphosphonium bromide and metallic sodium. I. N. Paden'ev and A. A. Shamsburin. *J. Gen. Chem.* (U. S. S. R.) 9, 805-7 (1939).--Dry $\text{Ph}_3\text{CCH}_2\text{PBr}_2$ (I), obtained in almost quant. yield from Ph_3P and PhCH_2Br in toluene, was warmed (8.19 g.) with 0.43 g. Na powder in 250 ml. ether for 2 days while stirring, after which time moist air was introduced into the reaction mixt. for 4 hrs. while stirring. The ether soln. was sucked off, the residue was washed 3 times with fresh ether and then filtered off. The solid mixt. was treated with alc. whereby 1.920 g. I was extd. The residue consisted of 0.6721 g. NaBr. The ether soln. contained 2.022 g. Ph_3PO , m. 150-1°, and toluene. These results indicate that $\text{Ph}_3\text{CCH}_2\text{P}$ is the primary reaction product from I and Na. G. B.

ASAC SEA METALLURGICAL LITERATURE CLASSIFICATION

CA 10

Preparation of methyl chloride from dimethyl sulfate and aluminum chloride. A. A. Shamshurin. *J. Gen. Chem.* (U. S. S. R.) 9, 2207-8 (1939).—MeCl can be quickly prepd. in 100% yield by adding dropwise Me_2SO to anhyd. AlCl_3 at room temp. Chas. H. B. B.

AS - SLA METALLURGICAL LITERATURE CLASSIFICATION

A new method for the synthesis of the homologs of benzene through alkyl sulfates. A. A. Shamshtin

Trudy i Zekskogo Gosudarst. Univ., Sbornik Khim. fraktsii (considering both Me groups) and 9 g. (25.7%) 15, 26 32 (in English, 32) (1939). — All expts. were carried of the polymethylbenzene fraction (recalcd. to dimethyl- out as follows: 0.4 mol. of AlCl_3 is placed in a 500 cc benzene). Fractional distn. of the products produced flask in an ice bath provided with an elec. mixer, reflux toluene, b. $100-10^\circ$, d. 0.8688, and m-xylene, b. $130-6^\circ$ condenser and drop funnel, and an excess of the hydro- d_4^0 0.8636, which was isolated from the xylene fraction carbon is added. Me_2SO is added slowly (3-4 hrs.) so that no bubbles of MeCl escape during the immersion of the gas-inlet tube into water. Evolution of HCl begins almost immediately. Cooling with snow is con- Nitration of the toluene fraction with fuming HNO_3 and tinued on the following day. After this the reaction is H_2SO_4 produced the solid 2,4-dinitrotoluene, pale-yellow carried out at room temp. ($15-20^\circ$) and, finally, with needles, m. $70-70.5^\circ$ (from aq. alc.). Oxidation of the heating with warm water at up to $35-45^\circ$ during the last sample with alk. KMnO_4 produced HCOOH , m. 121° . Ox- 8-10 hrs. The reaction is completed after 48-50 hrs. idation of m-xylene with $5\% \text{HNO}_3$ by heating the mix- The contents of the flask are treated with acidified water in a sealed tube for 16 hrs. at $150-160^\circ$ produced iso- with a large amt. of ice. The brown layer sepg. from the phthalic acid, m. 348 (from alc.). Condensation expts. aq. layer is sepd., washed with water, twice with $10\% \text{NH}_4\text{OH}$ and again with water and dried with CaCl_2 . on toluene with Me_2SO produced 21.5 g. (30%) of a For the decompt. of the residue of alkyl sulfate the mixt. xylene fraction, b. $134-9^\circ$, d. 0.8681, and $14 p$ (35%) of polymethylbenzenes (recalcd. to trimethylbenzene). Fractional distn. produced m-xylene, b. $137-8^\circ$, d_4^0 0.8638, and trimethylbenzene (mesitylene), b. $160-4^\circ$, d_4^0 0.8558, mol. wt. 124. Oxidation of m-xylene with HNO_3 produced isophthalic acid. Nitration according to Beilstein and Lehmann produced 2,4,6-trinitro-m- toluene, m. 182 (from alc. benzene). Nitration of tri- methylbenzene with glacial AcOH produced dinitro- methylbenzene (D), m. 86 . Condensation expts. on m- xylene with Me_2SO produced 12 g. of a $155-80^\circ$ fraction whose further fractionation showed that it consisted of trimethylbenzenes (78%), mainly mesitylene. The yield

was 0.4 g. (52%) (calcd. to MeSO_2). The fraction b. 162-165° was mesitylene, d_4^{20} 0.8559, mol. wt. in benzene 122. Nitration in glacial AcOH produced 1. The yield of the polymethylbenzene fraction was 7.5 g. S. concludes that (1) toluene and xylene can be alkylated by using MeSO_2 under conditions of the Friedel and Crafts reaction; (2) AlCl_3 takes part in these reactions not only as a condensation agent, but also as a source of halogen for the formation of alkyl halide; (3) the temp. must be kept at not over 25° during the initial 10 hrs. of the reaction and cooling of the mixt. is necessary at the beginning of the reaction; (4) the order of the addition of AlCl_3 and MeSO_2 is of no importance; (5) the effect of MeSO_2 on AlCl_3 can be used as a source for the production of MeCl (for demonstration purposes) owing to the simplicity, easiness and rapidity of the reaction. W. R. Hearn. Ten references.

PROCESSES AND PROPERTIES INDEX																									
Rearrangement of ethers of 7-hydroxy-4-methylcoumarin. Synthesis of tetrahydrotubanol. A. A. Shamsurin. <i>Trudy L'zhskogo Gosudarst. Univ., Sbornik Khim. Khim.</i> 15, 33-9 (1939). Expts. with the iso-Am ether of 7-hydroxy-4-methylcoumarin (I) proved the possibility of rearrangements according to Fries of I with said alkyls. Tetrahydrotubanol (II) (2-isomylresorcinol) can be obtained by splitting the lactone ring of the 7-hydroxy-8-isomyl-4-methylcoumarin (III) by the action of bases. Very small yields are obtained. The initial I was prepd. by combining resorcinol and acetone ester with H_2SO_4 . Resorcinol (50 g.) and 62.2 g. $AcCH_3CO_2H$ were mixed in a 1-l. beaker to a uniform paste and 150 ml. 25% H_2SO_4 was added to it. The paste dissolved slowly with evolution of heat, producing a dark-red soln. which was kept for 30 min. at $80-5^\circ$ in a water bath. The soln. was cooled to room temp. and added to 2 l. of water with ice. The light-yellow ppt. was carefully washed free from acid with cold water and dried at 100° . The yield was 77 g. For the prepn. of the isomyl ether of I, $C_6H_5OOC(CH_3)_2$ (11 g., 0.07 mol.) of I and 1.68 g. (0.07 mol. of metallic Na in 150 ml. of abs. alc. (dried with Mg according to Bjerrum) and 15 g. (0.1 mol.) of iso-AmBr, b. $117-18^\circ$, and heat for 15 hrs. in a water bath. Transfer the contents of the tube to water, filter the ppt., treat it with cold 5% base for the extn. of the unreacted I. The needles recrystd. from 75% alc. m. $54-5^\circ$, are sol. in ether, acetone, $CHCl_3$ and benzene and slightly sol. in petr. ether and (iso-Am) $_2O$. The ether is not hydrolyzed in 20% KOH when heated for 1 hr. in a water bath. Approx. 1 g. of I was dissolved in 20 ml. of EtOH, 1 ml. of concd. H_2SO_4 added and the mixt. heated for 5 hrs. in a water bath. After neutralization with soda soln. and addn. of acid a ppt. was formed which m. $180-3^\circ$ after crystn. from alc. III was obtained by the rearrangement of the iso-Am ether of I with $AlCl_3$ under the conditions of the Fries reaction. The mixt. obtained by grinding 12 g. of the ether and 12 g. of anhyd. $AlCl_3$ was placed in a 200-ml. pyrex beaker supplied with a long glass tube provided with a $CaCl_2$ tube and heated slowly to 140° in an oil bath for 1 hr. The dark brown melt (solidifies rapidly on cooling) was treated as usual with weak H_2SO_4 and ice, the ppt. was washed carefully from acid on a Büchner funnel and crystd. from 75% alc., producing 3.5 g. of pale yellow needles, m. 164° , sol. in bases. No color was produced with alc. $FeCl_3$. An ether soln. of CH_3N_3 (obtained from 4 ml. of $MeN(NO)CO_2Et$) was added to 0.6 g. of 7-hydroxy-8-isomylcoumarin in 5.5 ml. of MeOH. The soln. was left standing overnight, the solvent distd. off in a water bath and the remaining oil crystd. Colorless needles (0.46 g.), m. 112° , were obtained after recrystn. from ligroin (b. $70-80^\circ$). III (5 g.) was heated for 2 hrs. in a water bath with 8 g. of NaOH in 20 ml. of water. After the splitting the mixt. was cooled, acidified with H_2SO_4 , and extd. 3 times with ether. The combined ether exts. were washed with HCO_2^- soln. and with water and dried																									

over hot Na_2SO_4 . The ether was distd. off and the residue distd. *in vacuo* at 150° (20 mm.) and recrystd. from ligroin. The yield of II was 0.9 g. Condensation of II with $\text{AcCH}_2\text{CO}_2\text{Et}$ in III was carried out in the presence of H_2SO_4 , according to Pechmann: 3 ml. of concd. H_2SO_4 was added to 1.5 g. of II mixed with 1.5 g. of freshly prepd. $\text{AcCH}_2\text{CO}_2\text{Et}$ and heated in a sand bath to 80° . The temp. was then raised to 130° and the mixt. kept at this temp. for several min. The dark-brown soln. was carefully poured into ice water. The ether ext. produced a residue (after distg. off the ether) which after recrystn. from MeOH produced 0.4 g. of III, m. $103-4^\circ$. Nine references. W. R. Henn

COMMON ELEMENTS		PROCESS AND PROPERTIES INDEX	
COMMON ELEMENTS		PROCESS AND PROPERTIES INDEX	
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Synthesis of methylnonylbenzylcarbinol. A. A. Shamshurin and R. A. Isadulin. <i>Tr. dy Uzbekskogo Gosudarst. Univ., Sbornik Rabot Khim.</i> 15, 40-2 (1980). -In a 1-l. flask provided with a reflux condenser, drop funnel and a stirrer with a 11g seal place 8g. ($\frac{1}{2}$ mol.) of dry Mg shavings and 200 ml. of dry ether, add drop by drop from the funnel with mixing an ether soln. (1:1) of dried (with CaCl_2, freshly prepd. PhCH_2Cl, m. 176-9°, equiv. to 43 g. ($\frac{1}{2}$ mol.). The reaction is started by adding a crystal of I and by immersing the flask in warm water, which is later cooled with ice. Let the soln. stand overnight with const. mixing, heat in a water bath for 1 hr., cool the product of the reaction in an ice bath, add an ether soln. (2:1) of freshly distd. (<i>in vacuo</i>) Me nonyl ketone, b_p 107-8°, equiv. to 57 g. ($\frac{1}{2}$ mol.) and keep in a water bath for 1 hr. with const. mixing. After cooling decomp. the org. Mg complex with ice and 10% H_2SO_4, sep. the upper ether layer, ext. the aq. layer 3 times with ether, combine the exts. and wash several times with soda and water. Dry with Na_2SO_4, distil off the ether, freeze out the bibenzyl from the settled oil, filter the bibenzyl crystals in a Büchner funnel as rapidly as possible and distil the filtrate <i>in vacuo</i>.			
The bibenzyl was recrystd. and identified (m. 52°). Since the product was contaminated with traces of ketone (odor of oranges) the mixt. was fractionally distd. twice <i>in vacuo</i>. The yield of the main portion, b_p 170°, was 58 g. (68%). The methylnonylbenzylcarbinol, $\text{C}_{11}\text{H}_{20}\text{O}$, is an oily, nearly colorless liquid with a mushroom odor, d₄ 0.9273, n_D 1.496, mol. wt. in freezing benzene 250.4, IR no. (Zerevitinov) 6.03% (calcd. 6.38%). Two references. W. R. Flinn			
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION			
13000 SYNTHESE			
13000 SYNTHESE			

Ca

Esters of pyrocarbonic acid. Butyl pyrocarbonate.
 1. N. Parfent'ev and A. A. Shainshurin. *Trudy Uzbekskogo Gosudarst. Univ., Khim. Ser.* 15, 67-74 (1930). The object of the expts. was to verify and to develop further the method of Boehm and Mehla (C. A. 32, 9043) for the prepn. of pyrocarbonic esters with other radicals and to extend their use as carbalkoxylation agents for other compds. By treating ClCO_2Bu in the presence of emetine with a 10% KOH soln. P. and S. obtained and identified a new Bu ester of pyrocarbonic acid, $(\text{BuO}_2\text{C})_2\text{O}$, b. 115-16°, d. 0.9817, and tried it out as a carbobutoxylating agent in regard to amines and phenols. In this manner P. and S. prepd. Bu β -ethoxyphenylcarbamate (4-carbomethoxyethoxyphenylurethan), β - $\text{EtOC}_6\text{H}_4\text{NHC(O)Bu}$, colorless needles, m. 234-5° (slight decompn.); α - EtO isomer, long colorless needles, m. 204.5-205°, sol. in CHCl_3 and acetone, practically insol. in AcOH and CCl_4 ; Bu phenylhydrazinocarboxylate (carbobotoxyphenylhydrazine), $\text{Ph(NH)}_2\text{CO}_2\text{Bu}$, pearly scales, m. 234-5°, insol. in CCl_4 , CHCl_3 and petr. ether, sol. in acetone; Et ester (carbethoxyphenylhydrazine), m. 81°, (nearly quant. yield); Et β -ethoxyphenylcarbamate (4-carbomethoxyethoxyphenylurethan), β - $\text{EtOC}_6\text{H}_4\text{NHC(O)Et}$, snow-white needles, m. 92.5°, caused no depression of

m. p. when mixed with a prepn. obtained by treating β -phenetidine with ClCO_2Et ; 1-naphthylurethan, $\text{C}_{10}\text{H}_7\text{NHCO}_2\text{Et}$, needles, m. 79-80° (nearly quant. yield); 2-naphthylurethan, needles, m. 71-2°; Et 1-naphthyl carbonate, plates, m. 32°. The general equation for all these reactions of carbethoxylation with pyrocarbonic esters is $\text{RNH}_2 + (\text{ROCO})_2\text{O} \rightarrow \text{RNHCO}_2\text{CO}_2\text{R} + \text{ROH} \rightarrow \text{RNHCO}_2\text{R} + \text{CO}_2$. An excellent yield was obtained in the prepn. of quinine Et carbonate (equinine), m. 94-5°, according to the equation $\text{C}_{20}\text{H}_{24}\text{N}_2\text{O(OH)} + (\text{EtOCO})_2\text{O} \rightarrow \text{C}_{20}\text{H}_{24}\text{N}_2\text{O(OCO}_2\text{Et)} + \text{EtOH} + \text{CO}_2$. 0(CO_2Et), (2 g.) reacted with SOCl_2 (2 g.) in a 50-ml. flask equipped with a reflux condenser for 1 hr. in a water bath according to the reaction $(\text{EtOCO})_2\text{O} + \text{SOCl}_2 \rightarrow 2\text{EtOCOCl} + \text{SO}_2$. The reflux condenser was equipped with a CaCl_2 tube to prevent any access of moisture into the reaction flask. After all SO_2 was evolved the residue was distd. from a small Würtz flask under atm. pressure. The main fraction (1.9 g.) b. 91-9° and was identified as EtOCOCl . The reaction characterizes the pyrocarbonic esters as peculiar anhydrides which possess some analogy with ordinary anhydrides. This splitting mechanism confirms the structure of the mol. of pyrocarbonic ester. Attempts to replace emetine with such bases as urotropine for the prepn. of pyrocarbonic esters were unsuccessful. The corresponding S analog, $(\text{EtSCO})_2\text{O}$, was not produced under the same conditions from the treatment of emetine (in the presence of base) with EtSCl , which was obtained from the reaction of phosgene with EtSH . 11 references.
 W. R. Henn

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

66

The selective ability of the ethylene bond, depending on the charge of the radicals. A. A. Shamshurin. *Trudy Uzbekskogo Gosudarst. Univ., Sbornik Rabot Khim.* 15, 75-85 in English, 86 (1939).—S. showed that it is possible to extend the Wagner-Saytzeff rule (*Ann.* 179, 313 (1875)) in case of the reaction between $\text{PhCH} \cdot \text{CHMe}$ and HCl and proved that the halogen is attached to the double-bond C atom which is bound to the Ph radical. An attempt is made to explain qualitatively the effect of the orientation of the ethylene bond on the addn. of HX from the point of view of the electronic theory. For the addn. of the HCl elements to $\text{PhCH} \cdot \text{CHMe}$ the following rule can be formulated: the halogen atom is attached to that

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atom, i.e., to Ph. In the splitting off of the halogen atom from alkyl halides the halogen atom removes a H atom from that C atom which is bound to the most neg. radical, the splitting off of the HCl elements from $\text{PhCH} \cdot \text{CHClMe}$ produces $\text{PhCH} \cdot \text{CHMe}$. The splitting off of HCl from PhCHClEt also produces $\text{PhCH} \cdot \text{CHMe}$. The method used for the expts. was as follows. 2-Phenyl-1-propanol and 1-phenyl-2-propanol were synthesized by the Grignard reaction for the production of 1- and 2-chloropropylbenzene. Both aces. were transformed into the chlorides from which the HCl elements were removed by twice the theoretical amt. of alc. KOH . The obtained hydrocarbons were analyzed by the combustion method, oxidized with KMnO_4 and their structure detd. Then dibromides were obtained. This was followed by another addn. of the HCl elements which were again split off until the mechanism of the reaction was detd. (1-Chloropropylbenzene is a colorless liquid, b. $77-8^\circ$, d. 0.81). The acetate, $\text{PhCH}(\text{OAc})\text{Et}$, b. $227-8^\circ$. 2-Chloropropylbenzene, b. $94-5^\circ$. 27 references. W. R. Henn

ASAC 56A METALLURGICAL LITERATURE CLASSIFICATION

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Veratral-6-arsonic acid. A. A. Shamshurin. J. Gen.
Chem. (U. S. S. R.) 11, 647-9(1941).—See C. A. 35,
5860^a. C. L. B.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

CUTTING UNIT DATA SHEET

SHEET NO. 1

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TEST AND END USERS																										PROCESSES AND PROPERTIES INDEX																										END AND OTHER GROUPS																									
Some ethers of 7-hydroxy-4-methylcoumarin. A. A. Shamshurin and R. A. Dadulin. <i>Trudy Vsesoyuznogo Nauchno-Issledovatskogo Instituta Khimii</i> [N. S.], No. 25, Khim., No. 1, 1-8 (1941). The prepn. of ethers of 7-hydroxy-4-methylcoumarin (I) is of interest, practically because of the sweet taste of some of them, and theoretically because of the possibility of prepn. of 2-substituted resorcinols by rearrangement and hydrolysis. The <i>iso-Am ether</i> of I, prepd. by heating 15 g. I, 20 g. iso-AmBr and 1.8 g. Na in 150 cc. abs. EtOH in a sealed tube for 16 hrs. on a water bath, m. 54° (from 75% EtOH). <i>Hexyl ether</i>, prepd. by heating 75 cc. abs. EtOH, 1.9 g. Na, treated with 10 g. I and 12 g. hexyl iodide, for 12 hrs. on a water bath, m. 134-5° (from 75% EtOH). <i>Benzyl ether</i>, prepd. by heating 15 g. I, 11 g. BzCl and 2 g. Na in 100 cc. dry EtOH for 4 hrs. on a water bath, m. 112.5° (from 50% EtOH). <i>Cinnamate</i>, prepd. by heating 13 g. I with 15 g. PhCH=CHCOCl in 35 cc. dry pyridine for 2 hrs. on a water bath, m. 146-7° (from benzene). <i>Chloroacetate</i>, prepd. by heating (after initial cooling) of 20 g. I in 100 cc. dry pyridine treated with 20 g. ClCH₂COCl, m. 232° (from PhMe). <i>3-Bromoallyl ether</i> of I, from 33 g. I, 1.7 g. Na in 100 cc. dry EtOH and 138 g. MeCHBrCH₂Br, heated on a steam bath for several hours, m. 100° (from EtOH). <i>Benzenesulfonate</i> of I from 15 g. I and 15 g. PhSO₂Cl treated with 2 g. Na in 100 cc. abs. EtOH, followed by heating on a water bath, m. 112-13° (from EtOH). <i>p-Toluenesulfonate</i>, prepd. as above with 15.5 g. p-MeC₆H₄SO₂Cl, m. 107-8° (from EtOH). G. M. Kosolapoff																																																																													
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Synthesis of 2-substituted resorcinols. 2-Butyryl- and 2-butyresorcinol. A. A. Shamskurin and K. V. Arkhangelskaya, *Trendy Uchebnogo Gosudarst. Ucheb. (N. S.)*, No. 25, Khim. No. 1, 9-17 (1941).—The authors prepd. 2-butyryl- (I) and 2-butyresorcinol (II), because of the biol. interest of ring-substituted resorcinols. 4-Methyl-7-hydroxycoumarin (12 g.) in 25 cc. dry pyridine was heated for 1 hr. on a water bath with 18 g. PrCOCl to give 50% of the butyrate, m. 92.5° (from EtOH). This ester (13 g.) ground with 33 g. AlCl_3 and heated to 100°, then to 100-5° for 1 hr., yields 4-methyl-7-hydroxy-3-butyrylcoumarin (III), m. 145° (from EtOH). *Me ether* of III, from 1 g. III treated with 4 cc. 20% NaOH and 2 cc. Me_2SO , m. 127.5° (from EtOH). III acetate, from 1 g. III, 1 cc. Ac_2O and 3-4 drops H_2SO_4 heated for 0.25 hr. on a water bath, m. 141.2° (from aq. EtOH). Benzoyl, from 0.4 g. III in 20 cc. dry pyridine and 0.3 g. BaCl_2 , briefly heated on a water bath, then let stand, m. 138-9° (from EtOH). III (0.3 g.) in 5 cc. AcOH treated with 0.15 g. PhNHNH_2 in 3 cc. AcOH yields the phenylhydrazones of III, m. 220° (decompn.). On boiling 10.6 g. III with 160 cc. N NaOH for 0.25 hr., there is obtained 50% of 2-butyrylresorcinol (I), m. 112.5° (from H_2O or ligroin). I (1 g.) heated with 3 cc. 30% NaOH and 2 cc. Me_2SO , 1.5 hrs. on a water bath yields 1,3-dimethoxy-2-butyrylbenzene, b. 287 (9°). By Clemmensen reduction of 1 g. I with 50 g. amalgamated Zn, 15 cc. concd. HCl, 1.5 cc. AcOH and 3.5 cc. H_2O , heated under a reflux for 5 hrs. there is obtained 2-butyresorcinol (II), m. 74-5° (from ligroin). Dibenzoyl of II, m. 117-18° (from aq. EtOH). Propyl(2,6-dimethoxyphenyl)carbinol, prepd. by treatment of 0.8 g. $(\text{MeO})_2\text{C}_6\text{H}_3\text{COPr}$ in 8 cc. abs. EtOH with 0.8 g. Na, followed by heating on water bath, m. 45-6° (from G. M. Kosolapoff

PROCESSING AND PROPERTY INDEX

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Veratral-6-arsonic acid. A. A. Shamshurin. *Trudy Uchebnoy Gosudarst. Univ.* (N. S.), No. 25, Khlm. No. 1, 19-22 (1941).—Veratral was prepd. in 84% yield by methylation of com. vanillin by Me_2SO_4 . To 100 cc. HNO_3 (d. 1.42) at 5° there was added slowly 10 g. veratral and the soln. let stand in the dark for 3 hrs. at 0° and treated with H_2O ; 6-nitroveratral, m. 133-4° (from EtOH), resulted in 64% yield; 10 g. added in hot water to 100 g. Fe sulfate in 500 cc. boiling H_2O , followed by slow addn. of 100 cc. concd. NH_4OH (to alk.) and boiling for 5-10 min. yields, on filtration, cooling and benzene extr., 6-amino-veratral, m. 83-4° (from benzene-ligroin) (7.7 g.). The NH_2 compd. (10 g.) in 9.5 cc. H_2O and 9.5 cc. concd. HCl was diazotized at 0° by 2 g. NaNO_2 in 20 cc. H_2O ; HCl was diazotized at 0° by 2 g. NaNO_2 in 20 cc. H_2O ; the diazonium soln. was treated with Na arsenite, prepd. from 3.3 g. As_2O_3 , 4.4 g. NaOH and 45 cc. H_2O ; to the mixt. there was added 2 cc. $\text{Cu}(\text{OAc})_2$ soln., causing N evolution which was completed by 0.5 hr. heating on the water bath. After filtration and acidification by HCl , there was obtained 46.2% veratral-6-arsonic acid, m. about 300° (decomn.) (from dil. HCl); semicarbazone ($2\text{H}_2\text{O}$), m. 256° (sealed tube). The acid is stable to boiling with 15% HCl or 30% NaOH , only 25% and 37%, resp., being decompd. after 1 hr. treatment. By oxidation with K_2MnO_4 in the presence of MgSO_4 the acid yields 3,4-di-methoxy-6-arsonobenzoic acid, $(\text{MeO})_2\text{C}_6\text{H}_3(\text{CO}_2\text{H})\text{AsO}_2$, H_2 , m. over 300° (from EtOH); Ba salt, needles (from H_2O). G. M. Kosolapoff

A. B. S. L. A. METALLURGICAL LITERATURE CLASSIFICATION

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PRELIMINARY AND PROPERTIES INDEX

the preparation of piperonylideneacetic acid A. A. Shamsburin and M. Karleva, *Trudy L'vovskogo gos. univ. (N. S.)*, No. 25, Khim. No. 1, 215 (1941). The authors found that the known methods of prep. piperonylideneacetic acid are not very satisfactory and carried out the prep. analogously to the Friedmann-Mau prep. of cinnamylideneacetic acid (C. A. 26, 1271). Piperonal (22.5 g.) and 15 g. pyruvic acid, cooled with ice, are added to 7.5 g. pure NaOH in 100 cc. 50% EtOH, with stirring, in the course of 1 hr., followed by stirring for 1.5 hrs., filtration and washing with EtOH, to yield 67% of Na piperonylideneacrylate, $\text{CH}_3\text{O}_2\text{C}_6\text{H}_4\text{CH}=\text{CHCO}_2\text{Na}$ (I) (10 g.) in 200 cc. H_2O , cooled with ice, is treated during 15 min. with 6 cc. 30% H_2O added from a buret. After 1.5 hrs. the CO_2 evolution ceases, the ppt. is filtered and acidified by 2 N H_2SO_4 . The pptd. yellow acid is obtained in 88% yield, m. 232° (from MePh), which agrees with the known value for piperonylideneacetic acid, $\text{CH}_3\text{O}_2\text{C}_6\text{H}_4\text{CH}=\text{CHCO}_2\text{H}$. G. M. Kosolapoff

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PROCESSES AND PROPERTIES INDEX																																																			
10 22 Action of pyrocarbonates in Grignard reagents. A. A. Shamshurin, <i>J. Gen. Chem.</i> (U. S. S. R.) 13, 365-72 (1943) (English summary).—PhMgBr (from 35 g. PhBr) was treated with cooling and stirring with 9 g. O(CO₂Et) in abs. Et₂O; after standing overnight, the mixt. was decomposed with ice and NH₄Cl soln. to yield 54% BrOH, b. 212-13°, and 64% PhCOH, m. 161-2° (from EtOH). PhMgBr (from 23 g. PhBr) was treated analogously with 8 g. O(CO₂Bu), to yield 4 g. BrOBu, b. 248-9°, and 6.3 g. PhCOH. G. M. Kozolapov																																																			
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ca Synthesis of some quinazoline derivatives structurally close to alkaloids. A. A. Shamshurin. <i>J. Gen. Chem.</i> (U. S. S. R.) 13, 573-8(1943)(English summary).—Homopiperonyl chloride (from the acid and SOCl_2) (10 g.) was reacted in cooled 50% AcOH with 9 g. 6-amino-veratralkdehyde in the presence of NaOAc, to yield homopiperonylamidoveratralkdehyde (5 g.), m. 153.5-4° (from dil. EtOH), which gives an emerald-green color with H_2SO_4. The above (2 g.) was heated in a sealed tube with 30 cc. MeOH satd. with NH_3 for 2 hrs. at 110-20°, to yield 1.03 g. 2-piperonyl-6,7-dimethoxyquinazoline, m. 148.5-9° (from ligroin); yellow color with H_2SO_4. Homopiperonylamidopiperonal, prepd. analogously from 6-amino-piperonal, m. 170-80° (from 70% EtOH). The above (3 g.) and 40 cc. MeOH, satd. with NH_3, in a sealed tube for 2 hrs. at 110-20°, gave 2.4 g. 2-piperonyl-6,7-methylenedioxyquinazoline, m. 190.5-1° (from ligroin); yellow color with H_2SO_4. The above (2.5 g.) suspended in 150 cc. H_2O was treated over 1.5 hrs. with 150 g. 4% Na-Hg, to yield 32% 2-piperonyl-6,7-methylenedioxytetrahydroquinazoline, m. 212-13° (from ligroin); HCl salt, m. 238° (decompn.). G. M. Kosolapoff			
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A new synthesis of γ -resorcyaldehyde. A. A. Shamshurin. *J. Gen. Chem.* (U.S.S.R.) 14, 211-15 (1944) (English summary). --4-Methyl-7-hydroxycoumarin and allyl iodide in Me_2CO or C_6H_6 give 97% 4-methyl-7-allyloxycoumarin. When this is boiled 18 hrs. in decalin it gives 93.5% 4-methyl-2-hydroxy-8-allyloxycoumarin which is heated 0.5 hr. with 20% NaOH in a N atm. to give 51.3% 2-allylresorcinol (I) and 32.1% 2-methyl-4-hydroxycoumaran, m. 110°. I and Me_2SO give 96% of the di-Me ether, b. 114°, d₄²⁰ 1.0492, n_D²⁰ 1.5452, MR_D calcd. 52.21, found, 52.71. This is refluxed 10 hrs. with alc. KOH to give 96% 2,6-dimethoxy-1-propenylbenzene, b. 110-113°, d₄²⁰ 1.0543, n_D²⁰ 1.5402, MR_D calcd. 52.21, found, 52.01. $\text{Na}_2\text{Cr}_2\text{O}_7$ oxidation in the presence of sulfanilic acid gives 70% 2,6-(MeO)₂C₆H₃CHO which is demethylated with AlCl_3 to give first 74% mono-Me ether, m. 74-5°, and then 97% γ -resorcyaldehyde.

H. M. Leicester

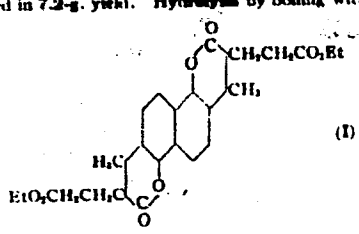
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ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

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1ST AND 2ND DEGREE										3RD AND 4TH DEGREE									
PROCESSING AND PROPERTY INDEX																			
Structure and synthesis of 2-methyl-4-hydroxycoumaran. A. A. Shamshurin. <i>J. Gen. Chem.</i> (U.S.S.R.) 14, 881-4 (1944) (English summary). <i>2-Methyl-4-hydroxycoumaran</i> was prepd. from 4-methyl-7-hydroxycoumaran allyl ether which was isomerized in boiling dioxane to 4-methyl-7-hydroxy-8-allylcoumaran; 50 g. of the latter heated for 1 hr. on a water bath with 400 ml. 20% NaOH, neutralized by HCl, extd. with Et₂O and the ext. dried, gave 33.0% 2-allyl-resorcinol, b. 104-5°, and 36.0% 2-methyl-4-hydroxycoumaran, b. 175-7°, m. 117-18°. The latter compl. is readily prepd. from the former by heating with aq. HBr on a steam bath for 4 hrs.; a slightly lower yield is obtained when the HBr is used in AcOH. It is readily prepd. on hydrogenation of 2-methyl-4-hydroxycoumarone. G. M. Kosolapoff																			
A 58-15 A METALLURGICAL LITERATURE CLASSIFICATION																			
1ST AND 2ND DEGREE										3RD AND 4TH DEGREE									

1ST AND 2ND ORDERS										3RD AND 4TH ORDERS									
PROCESSES AND PROPERTIES INDEX																			
Condensation of dihydroxynaphthalene with α-aceto-glutaric ester. A. A. Shamshurin. <i>J. Gen. Chem.</i> (U.S.S.R.) 14, 885-8(1944) (English summary). --1,5-C₁₀H₆(OH)₂ (8 g.) is mixed with 27.6 g. di-<i>tert</i>-α-acetylglutarate, and with ice-cooling treated with 50 g. cold concd. H₂SO₄. After 30-40 min. a ppt. is formed. On standing overnight, the mixt. is treated with ice-water and the product filtered off and water-washed; <i>6,6'</i>-<i>di</i>-α-acetylglutarate-<i>pyrene-3,3'</i>-<i>dipropionate</i> (I); m. 103-3° (from dil. EtOH), was obtained in 7.2-g. yield. Hydrolysis by boiling with 4 N  (I) NaOH gave the corresponding acid, m. 227-8° (from MeOH); its Ag salt is amorphous. G. M. Koudapoff																			
ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION																			
13000 11113111										13000 11113111									
13000 11113111										13000 11113111									

COMMON ELEMENTS										COMMON VARIANTS INDEX									
1ST AND 2ND ORDERS										1ST AND 2ND ORDERS									
10										10									
Synthesis of <i>dl</i> -1-(2,6-dimethoxyphenyl)-2-aminoethane. A. A. Shamshurin (Med. Inst. Samarkand). <i>J. Gen. Chem.</i> (U.S.S.R.) 15, 978-80 (1945). — The prepn. of <i>dl</i> -1-(2,6-dimethoxyphenyl)-2-aminoethane (I) for physiol. evaluation in comparison with similar compounds is given. 2-Acetylfreserol was prepd. by alk. cleavage of 7-hydroxy-8-acetyl-4-methylcoumarin (cf. Innave and Gangal, C. I. 31, 21829); 9 g. of the dimethylated ketone, 4.5 g. NH_4OH , and 45 cc. EtOH in the presence of 15 cc. water and 3 g. NaOH gave 2,6-dimethoxycouphenone oxime, m. 161-2° (from petr. ether). This (10 g.) in AcOH was treated with 300 g. 3% Na-Hg with gradual addn. of water; after 4 hrs., when the soln. became alk., it was extd. with Et_2O , the ext. was shaken out with dil. HCl , and I was liberated by addn. of alkali, followed by Et_2O extn. and distn. <i>in vacuo</i> ; I, b. 204-5°, 4.2 g.; HCl salt, m. 182-3° (from CH_2Cl_2); <i>N</i> -benzoyl deriv., m. 105.5-6.5° (from petr. ether); <i>oxalate</i> , m. 170-1° (from EtOH); <i>picrate</i> , m. 185.5-6.5° (from MeOH). G. M. K.																			
ASB-3.1A METALLURGICAL LITERATURE CLASSIFICATION										E-2									
1ST AND 2ND ORDERS										1ST AND 2ND ORDERS									
1ST AND 2ND ORDERS										1ST AND 2ND ORDERS									

SHAMSHURIN, A. A.

Synthesis of *o,o'*-dimethoxystyrene. A. A. Shamsurin, *Chem. and Med. Ind. Inst. 1*, *I. G. Kh. Kh. (U.S.S.R.)* 16, 90 (1966). Hydroxy-1-methylbenzoin (188 g.) added to 30 g. NaOH in 100 cc. water and 50 g. ice and the mixt. treated with 60 g. Ac₂O yielded 95% Ac. deriv. 2-Acetylresorcinol was then prepd. according to Litavskii (1, 34, 2182) in 80% yield, m. 155-6°. Methylation with Me₂SO gave, on cooling, the di-Me ether of *o,o'*-dimethoxystyrene, m. 72-3°, the mother liquor gave, on reprecipitation, crude *o,o'*-Me deriv., which, treated with Et₂SO, gave the *Me* ether of 2-acetylresorcinol, m. 86° (from water). Reduction of the di-Me ether with Na in EtOH, according to Litavskii, gave 60% yield of 2,6-dimethoxyphenylcarbinol, m. 58-4°; phenylacetal, m. 59-60°. The carbinol slowly oxid. at 160-200° in the presence of 1.5% KHSO₅ yielded 60% yield of 2,6-dimethoxystyrene, b. p. 134-5°. Bromination in CHCl₃ gave the dibromide, m. 139-40° (from EtOH), while hydrogenation over Pt in AcOH gave 2,6-dimethoxy-1-ethylbenzene, m. 59-60°. The styrene (4.7 g.) with 2.5 g. Hg(OAc)₂ in 25 cc. water yielded flocculent 1-(chloromercurimethyl)-2,6-dimethoxyphenylcarbinol, m. 202-3°; this, with aq. KCl in EtOH, gave 1-(chloromercurimethyl)-2,6-dimethoxyphenylcarbinol, m. 143-5° (from PhMe) which, on reduction with 2% Na Hg in water, gave the original carbinol. G. M. Kosolapoff

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 PROCESSES AND PROPERTIES INDEX
 10

Synthesis of the structural fragments of rotenone and of its satellites. I. Syntheses in the tubic acid series. A. A. Shamsurin (Samarkand Med. Inst.). *J. Gen. Chem. (U.S.S.R.)* 16, 1877-84 (1946).—It was found possible to start with a benzenoid nucleus and to add to it the condensed furan ring. However, attempts to condense 2,6-(HO)₂C₆H₃CHO with chloro (or bromo) acetone in the presence of EtONa failed because of extensive tar formation. Successful syntheses were made starting with Me 2,4-dihydroxy-3-formylbenzoate (I), m. 137-8°, prep'd. according to Shah and Laiwalla (cf. *C.A.* 33, 1297). I (9 g.) in 225 cc. abs. EtOH at room temp. was treated with EtONa (from 1.4 g. Na and 40 cc. EtOH), followed by 10 g. freshly-distd. ClCH₂COMe; after heating on a steam bath 3 hrs., the solvent was removed at 40° *in vacuo*, and the residue dissolved in H₂O and ext'd. with Et₂O; the ext. on distn. with steam yielded a residue of 8 g. crude 2-acetyl-4-hydroxy-5-carbomethoxycoumarone (II), m. 178-9° (from petr. ether); heating with excess MeI in Me₂CO 18 hrs. gave the Me ether, m. 81-2° (from ligroin), while acetylation in pyridine with Ac₂O at room temp. for 3 days gave the acetate, m. 160-60.5° (from ligroin); benzate (using BaCl₂ in pyridine, 2-3 days at room temp., then 2 hrs. at 60-5°) m. 148-9° (from dil. EtOH); oxime (using HONH₂Cl and KOAc in dil. EtOH) m. 227-8° (decompn.; from dil. EtOH); semicarbazone (prepn. at room temp.; 4 days' standing) m. 243-4° (from MeOH); 2,4-dinitrophenylhydrazones m. 263-6° (from dil. AcOH). II (3 g.) and 7 g. NaOH in 60 cc. H₂O and 50 cc. EtOH, refluxed 0.5 hr., cooled, dild. with 250 cc. H₂O, filtered, and acidified with HCl, gave 2-acetyl-4-hydroxy-5-carboxycoumarone, m. 230.5-31° (from dil. AcOH); the acid gave a deep-blue color with FeCl₃, typical of *o*-phenolcarboxylic acids. Further proof of structure was afforded by decarboxylation: 0.8 g. of the acid, 40 g. dry quinoline, and 1 g. Naturskupfer C were heated to 200-300° 0.75 hr.; after cooling, dild. with Et₂O, and treatment with 3% HCl after filtration, the acid ext. was ext'd. with Et₂O to give 0.42 g. 2-acetyl-4-hydroxy-coumarone (III), m. 178-9° (from H₂O), which failed to give a color reaction with FeCl₃; benzate (using BaCl₂ and BzONa) m. 160.5-10.5° (from aq. MeOH); oxime m. 222-3° (from dil. EtOH); 2,4-dinitrophenylhydrazones m. 242-3° (from AcOH). A successful attempt at carbonylation of the product was made: 2.5 cc. dry MeOH and 0.25 g. Na in a steel bomb were treated with 0.3 g. III and 5 g. solid CO₂ and heated to 180° 2 hrs., after acidification with HCl, 1.25 g. 2-acetyl-4-hydroxy-5-carboxycoumarone, m. 228-9°, identical with an authentic sample. (C. M. Kosolapoff)

typical of *o*-phenolcarboxylic acids. Further proof of structure was afforded by decarboxylation: 0.8 g. of the acid, 40 g. dry quinoline, and 1 g. Naturskupfer C were heated to 200-300° 0.75 hr.; after cooling, dild. with Et₂O, and treatment with 3% HCl after filtration, the acid ext. was ext'd. with Et₂O to give 0.42 g. 2-acetyl-4-hydroxy-coumarone (III), m. 178-9° (from H₂O), which failed to give a color reaction with FeCl₃; benzate (using BaCl₂ and BzONa) m. 160.5-10.5° (from aq. MeOH); oxime m. 222-3° (from dil. EtOH); 2,4-dinitrophenylhydrazones m. 242-3° (from AcOH). A successful attempt at carbonylation of the product was made: 2.5 cc. dry MeOH and 0.25 g. Na in a steel bomb were treated with 0.3 g. III and 5 g. solid CO₂ and heated to 180° 2 hrs., after acidification with HCl, 1.25 g. 2-acetyl-4-hydroxy-5-carboxycoumarone, m. 228-9°, identical with an authentic sample. (C. M. Kosolapoff)

SHAMSHURIN, A. A.

"The Chemical Composition of Cotton Wax," Priroda, No.1, 1948

Lab. Organic Chemistry, Samarjand Med. Inst.

SH. DUBIN, A. A.

"All-Union Scientific Research Institute of Fur Studies in Samarkand," Priroda, No. 5,
1993.

SHAMSHURIN, A. A.

"200th Anniversary of the Discovery of Sucrose in Beets," Priroda, No.10, 1948

PA 23/49T15

USSR/Chemistry - Oil, Seeds Bearing
Chemistry - Tung Oil

Nov 48

"Oil From the Seed of the Catalpa Bignontoides,"
A. A. Shamshurin, $\frac{1}{2}$ p

"Priroda" No 11

Tree is common in gardens, squares and parks of
Central Asia republics. Oil resembles that of
tung tree. Table shows chemical constants of
both oils.

~~TOP~~

23/49T15

CH 10

The thermal polymerization of simple ethers of the allyl phenols. I. Polymerization of the methyl, ethyl, and isopropyl ethers of 2-allylphenol. A. A. Shamsurin and R. A. Isakhan (Sverdlovsk Med. Inst.). *Chem. (U.S.S.R.)* 19, No. 9, 390-101 (1980) (English translation). See *C.I.* 44, 1449. Ether incorrectly translated ester.

F I C

CA

Thermal polymerization of allylphenol ethers. I.
Polymerization of methyl, ethyl, and isopropyl ethers of 2-allylphenol. A. A. Shamshurin and R. A. Ibadulin. *Zhur. Obshchei Khim.* (J. Gen. Chem.) 19, 1069-74 (1949).
—Homogeneous polymerization of the ethers at 250° yields only the dimers, apparently with linear structure (Staudinger viscometric method) and with a residual double bond. The process can be followed by the variation of n_D over the 200-hr. expt. in sealed tubes; density can be used also, but viscosity gives but a small variation with the Me and Et ethers, although with the iso-Pr deriv. the change is large. The time-property curves are essentially linear, with the iso-Pr deriv. giving a rather sharp increase in 1st 50 hrs., followed by a linear curve up to 200 hrs., when 53.0% Me, 31.91% Et, and 65.15% iso-Pr ethers are polymerized. 2-Allylphenol, prepd. in 72% yield by rearrangement of $\text{PhOCH}_2\text{CH}=\text{CH}_2$, 6 hrs. at 190-220°, b_p 101-3°, b_m 218-19°, d_4^{25} 1.0101, n_D^{25} 1.5181, was converted to the ethers in 48-72% yields by heating with RX in alc. EtONa: Me, b_p 60-2°, d_4^{25} 0.9761, n_D^{25} 1.5232 (dimer, viscous liquid); Et, b_p 70-1°, d_4^{25} 0.9511, n_D^{25} 1.5110 (dimer, similar to the above); iso-Pr, b_p 65°, d_4^{25} 0.9415, n_D^{25} 1.5015; (dimer, similar to the above). All dimers add Br.
G. M. Kosolapoff

CA

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Synthesis of tetrahydrotubanol and tetrahydrotubic acid. A. A. Shamshurin (Lab. Org. Chem., Samarkand Med. Inst.). *Zhur. Obshchei Khim.* (J. Gen. Chem.) 19, 1964-8 (1949). -2,4-(MeO)₂C₆H₃CO₂Me (24.6 g.) in 75 ml. refluxing C₆H₆ treated with 2.3 g. Na and boiled 8 hrs., followed by addn. of 15 g. BrCH₂CH₂CM₂ and refluxing 6 hrs., gave 6.2 g. *Me isodihydrotubate*, m. 89-7° (from dil. MeOH), which on standing 75 hrs. with 15% NaOH gave the *free acid*, m. 165-6°. This (3 g.) hydrogenated with Pt oxide in abs. EtOH gave 2.2 g. *tetrahydrotubic acid*, m. 206° (decomp.; from 25% EtOH), which on refluxing 1 hr. with Cu bronze in quinoline gave *tetrahydrotubanol*, m. 81.5-2.5° (from petr. ether). The latter was converted to *8-isoamyl-7-methoxycoumarin*, m. 83-4°, according to Haller and Acree (*C.I.* 28, 4410^b), thus confirming the syntheses. G. M. Kosolapoff

IBADULIN R.A.; SHAMSHURIN, A.A.

Thermal polymerisation of allyl phenol. Dokl. AN Tadzh.SSR no.1:8-12
'51. (MIRA 9:10)

1. Insitut khimii Akademii nauk Tadzhikskoy SSSR, Kafedra khimii
Uzbekskogo Gosudarstvennogo universiteta. Predstavleno deystvitel'ny
chlenom Akademii nauk Tadzhikskoy SSR S.Yusupovoy.
(Polymers and polymerization)
(Cresol)

SHAMSHURIN, A.A.

Studying the gum of guayule. Dokl. AN Tadzh. SSR no.1:13-18 '51.
(MIRA 9:10)

1. Insitut khimii Akademii nauk Tadzhikskoy SSR. Predstavleno chlenom-
korrespondentom Akademii nauk Tadzhikskoy SSR V.F. Petrovym.
(Gums and resins) (Guayule)

SHAMSHURIN, A. A.

USSR/Chemistry - Organic Raw Materials; Oct 51
Toxic Substances

"Gossipol," A. A. Shamsburin

"Priroda" No 10, pp 54, 55

In view of the fact that the toxic constituent of cotton seed oil cake, gossipol, may poison animals to which the cake is fed, considerable attention has been paid in the USSR to methods of extracting gossipol and making it harmless if it remains in the cake. USSR chemists, by applying hydrolysis of the acetate with steam in alc soln or in vacuum, improved

211T38

the method of extraction to such an extent that the yield is twice of that obtained in the US. The use of large quantities of gossipol as a starting material for the synthesis of anti-septics, drugs, dyestuffs, antioxidants for rubber, plastics, etc., is envisaged.

211T38

PA 194T56

USSR/Chemistry - Insecticides

Nov 51

"Syntheses of Structural Fragments of Rotenone and Substances Occurring Together With It. Syntheses in the Field of Tubic Acid." A. A. Shamsurin, Lab of Org Chem, Samarkand Med Inst Imeni I. P. Pavlov

"Zhur Obshch Khim" Vol XXI, No 11, pp 2068-2074

Synthesized for the 1st time tubanol and tubic acid, most important fragments of rotenone mol. Selectively hydrogenated 2-acetyl-4-hydroxy-5-carbomethoxycoumarone on Pd-C catalyst with satn of only furan ring. Product was saponid and de-carboxylated, and resultant product was converted

194T56

USSR/Chemistry - Insecticides (Cont'd)

Nov 51

by Grignard reaction into tert alc 4-hydroxycoumaranyl-dimethylcarbinol, which was converted to tubanol by bromination and splitting off of HBr by Ag acetate or alc alkali. Tubanol was converted to tubic acid by Kolbe method. This synthesis clears up question of structure of tubanol and tubic acid.

194T56

SHAMSHURIN A. A.

SHAMSHURIN, A.A.

Studying the gum of guayule. Report no. 2. Dokl. AN Tadzh.SSR
no.5:19-22 '52. (MLRA 9:10)

1. Institut khimii AN Tadzhikskoy SSR. Predstavleno deystvitel'ny
chlenom AN Tadzhikskoy SSR S. Yusupovoy.
(Gums and resins) (Guayule)

1. SHAMSHURIN, A. A.
2. USSR (600)
4. Plastics
7. Preparation of synthetic resins and plastics. Khim. v shkole No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

SHAMSHUEIN, A.A., dotsent (Kishinev)

Two experiments on carbohydrates. Khim. v shkole 11 no.1:
56-58 Ja-F '56. (MLBA 9:2)
(Carbohydrates) (Chemistry--Experiments)

SHAMSHURIN, A.A. (Kishinev)

Laboratory synthesis of DDT. Khim. v shkole 15 no.6:78-79 H-D '62.
(Ethane) (MIRA 13:11)

LAZUR'YEVSKIY, Georgiy Vasil'yevich; TEREENT'YEVA, Ida Vladimirovna;
SHAMSHURIN, Aleksandr Andreyevich; TSUKERVANIK, I.P., red.;
STUKOVNIN, N.D., red. izd-va; VORONINA, R.K., tekhn. red.

[Practical work in the chemistry of natural compounds]
Prakticheskie raboty po khimii prirodnnykh soedinenii. Moskva,
Gos.izd-vo "Vysshaya shkola." No.1. [Methods of isolation,
separation, and identification] Metody vydeleniia, razdeleniia
i identifikatsii. 1961. 191 p. (MIRA 15:4)
(Chemistry, Organic--Laboratory manuals)

SHAMSHURIN. A.A.; REVENKO. Yu.M.

Syntheses in the series of γ -substituted resorcinols. Izv. AN Mold.
SSR no.10:86-97 '62. (MIRA 17:12)

SHAMSHURIN, A.A., kand.khimicheskikh nauk

Estrogenic growth stimulators in animal husbandry. Zhur. VKHO 8 no.6:
620-629 '63. (MIRA 17:2)

SHAMSHURIN, A.A.; YAMPOL'SKAYA, M.A.

Syntheses in the 5-hydroxychromone series. Zhur.ob.khim. 34 no.2:535-
538 F '64. (MIRA 17:3)

1. Institut khimii AN Moldavskoy SSR.

LAZAR'YEVSKIY, G.V., akademik: SHAYKHUTDIN, A.A., kand. khim. nauk

Research in the field of natural and biologically active compounds.
Vest. AN SSSR 35 no.2:62-65 P '65.

(MIRA 18:3)

1. Institut khimii AN Moldavskoy SSR. 2. AN Moldavskoy SSR (for
Lazar'yevskiy).

SHAMSHURIN, S.A., kand. khim. nauk

Urea phosphate in stockbreeding. Priroda 54 no. 10: 67-68 '65.
(MIRA 18:10)

I. Institut khimii AN Moldavskoy SSR, Kishinev.

SHAMSHURIN, A.A.; REVENKO, Yu.M.

Synthesis of 1-(2',6'-dimethoxyphenyl)-2-amino-1-propanol.
Zhur. org. khim. 1 no.8:1439-1442 Ag '65. (MIRA 18:11)

1. Institut khimii AN Moldavskoy SSR.

SHAMSHURIN, A.A.; KRIVOSHOCHKOVA, O.Ie.

New acceptor for the preparation of esters of pyrocarbonic
acid. Zhur, VKhO 10 no.5:594 '65.

(MIRA 18:11)

1. Institut khimii AN Moldavskoy SSR.

SHAMSHURIN, A.I.; KERNYER, M.A.; NESTEROVA, I.P.

Synthesis of 11-aminoundecanoic acid from castor oil. Ush.zap.
khoz.nau. 68:92-93 '63 (cover '62).

(MIRA 18:12)

KRIVONOSOVA, O. Ye.; SHAMSHURIN, A.A.

Esterification of high-molecular acids with pyrocarboxylic
esters. *Dokl. Akad. Nauk SSSR* 1965, 165, 165 (1965)

1. Institut khimii AN Moldavskoy SSR. Submitted April 29, 1965.

L 36493-66 ENT(m)/EWP(j) RM

ACC NR: AP6027086

SOURCE CODE: UR/0079/65/035/010/1877/1878

AUTHOR: Shamshurin, A. A.; Krivoshechekova, O. Ye.; Krimer, M. Z.

30
B

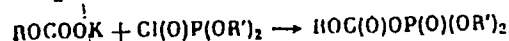
ORG: Institute of Chemistry, AN MoldSSR (Institut khimii AN MoldSSR)

TITLE: Synthesis of dialkylcarbalkoxyphosphates 1

SOURCE: Zhurnal obshchey khimii, v. 35, no. 10, 1965, 1877-1878

TOPIC TAGS: chemical synthesis, phosphate, potassium compound, carbonate, ester, solubility, organic solvent, chemical stability, hydrolysis

ABSTRACT: To synthesize dialkylcarbalkoxyphosphates; the authors used various potassium monoalkylcarbonates as one component and dialkylchlorophosphates as the other component in accordance with the equation



The 15 esters obtained were colorless liquids with a faint odor, sparingly soluble in water and soluble in ether, alcohol, benzene, and other organic solvents. They are unstable at room temperature and stable at 0°C. Hydrolysis results in the formation of dialkylphosphate, alcohol, and carbon dioxide. The yield of dialkylcarbethoxyphosphates was 60%. The physicochemical properties of the products are presented. Orig. art. has: 1 table. [JPRS: 36,328]

SUB CODE: 07 / SUBM DATE: 14Dec64 / ORIG REF: 007

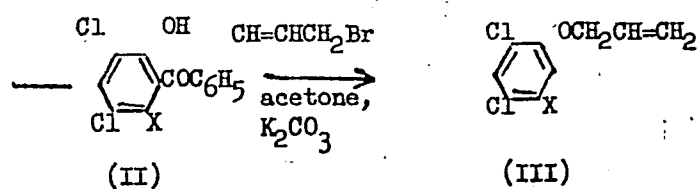
Card 1/1 *MLP*

UDC: 546.185:547.26'118
09.17 0086

L 06531-67

ACC NR: AP7000464

Moscow, Zhurnal Organicheskoy Khimii, Vol 2, No 5, May 1966, pp 855-857



(I, II, III) a) X = H; b) X = Cl

Orig. art. has: 1 formula. [PRS: 37,023]

TOPIC TAGS: organic synthetic process, chlorinated organic compound, ketone

SUB CODE: 07 / SUBM DATE: 24 Jun 65 / ORIG REF: 001/ OTH REF: 003

Card 2/2 eqk

1. SHAMSHUPIN, V.
2. USSR (600)
4. Hides and Skins
7. Quality of raw leather at meat plants, Mias. ind. 24, No. 1, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Uncl.

SHAMSHURIN, V.

Reasons for the low quality of raw hides. Mias.ind.SSSR 26 no.5:
25-27 '55. (MLRA 9:2)

1. Gosudarstvennyy inspektor po kachestvu kozhevnoye i pushno-mekhe-
vogo syr'ya.

(Hides and skins)

SHAMSHURIN, V.D., starshiy prepodavatel'

Collectives and shock workers of communist labor in the vanguard of the struggle for high labor productivity. Izv. vys. ucheb. zav.; gor. zhur. 6 no.9:76-81 '63. (MIRA 17:1)

1. Sverdlovskiy gornyy institut imeni Vakhrusheva. Rekomendovana kafedroy istorii Kommunisticheskoy partii Sovetskogo Soyuza.

SHAMSHURIN, V.I.

Major lack of precision in defining standards. Leg.prom. 15
no.11:19-20 N '55. (MLRA 9:2)

1.Gosinspektor kachestva syr'ya.
(Leather--Standards)

BARRELL, A.Z., dotsent, kand. tekhn. nauk; SHENSHURIN, V.I., 1958.

Calculation of gravity embankments. Trudy LIT no.66:9-11 '62.
(MIRA 19:2)

SH/ MSHURIN, V.M.

For successful control of gadflies in 1953. Veterinariia 30 no.2:
29-30 F '53. (MLRA 6:2)

1. Nachal'nik Sverdlovskogo otdeleniya gosinspektсии po kache-
stvu kozhsyr'ya pri MLP SSSR.

SHAMSHURIN, V.M.

Improve the salvaging of raw leather waste. Kozh.-obuv.prom.3
no.3:9 Mr '61. (MIRA 14:6)

(Waste products)
(Leather industry)

1. SHALSHURIN, Yu.
2. USSR (600)
4. Russia, Northern - Social Conditions
7. "By the frozen sea." Vokrug sveta No. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

SHAMSHURIN, Yu.

Spring on the Kolyma. Vokrug sveta no.9:11-16 S '53. (MLRA 6:10)
(Kolyma valley--Description and travel)

PIVOVAROV, Yu.A.; SHAMSHURIN, Yu.A.

Instantaneous value of torque in At-100-2 looms. Izv. vys. ucheb.
zav.; tekhn. teks. prom. no. 2:124-127 '61. (MIRA 14:5)

1. Leningradskiy tekstil'nyy institut imeni S.M. Kirova.
(Looms) (Dynamometer)

PIVOVAROV, Yu.A.; SHAMSHURIN, Yu.A.

Two methods of determining power consumption of looms. Izv.vys.
ucheb.zav.; tekhn.tekst.prom. no.6:121-125 '62. (MIRA 16:2)

1. Leningradskiy tekstil'nyy institut imeni Kirova.
(Looms--Testing)

SHAMSHUROV, V., polkovnik

Solution of a problem. Voen. vest. 42 no.10:91 0 '62. (MIRA 15:10)
(Attack and defense (Military science))

SHAMSIDDINOV, B.

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